

Treatment Tactics for Mobile Phone Addiction

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ABSTRACT

Objective: According to the State Statistics Committee of Azerbaijan Republic, there are 4 large mobile operators in the country. There are 108 mobile subscribers per 100 people. In this way, Azerbaijan has become one of the world's most active mobile phone users. Under these conditions, most people are engaged in gambling games, which is in line with the trends taking place in the world. **Materials and methods:** A total of 50 patients aged 18 to 35 years were examined. All patients were female. Patients were diagnosed according to ICD-11 6C50 gaming disorder - dependence on mobile phones. Patients were examined from January 2021 to July 2022 at the Mental Health Center of the Ministry of Health of the Republic of Azerbaijan. Patients received clomipramine (Anafranil) 300 mg/day (100 mg 3 times a day) and carbamazepine 600 mg/day (200 mg 3 times a day) orally for 6 months. **Results:** As the follow-up data (6 months) showed, milestones achieved full remission among 50 patients treated with Anafranil and carbamazepine. Respondent analysis was performed using an alternative statistical method. **Conclusion:** Clinical data indicate a high efficacy of Anafranil and carbamazepine in the treatment of mobile phone addiction. The mechanisms of action of the drug are discussed.

Keywords: Mobile phone; Addiction; Anafranil; Carbamazepine; Therapy

INTRODUCTION

According to the State Statistics Committee of Azerbaijan Republic, there are 4 large mobile operators in the country. There are 108 mobile subscribers per 100 people. In this way, Azerbaijan has become one of the world's most active mobile phone users. Under these conditions, most people are engaged in gambling games, which is in line with the trends taking place in the world.

Mobile addiction is a relatively new non-chemical addiction. An increasing number of people cannot imagine their life without a mobile phone, many do not let go of it almost throughout the day. At present, despite numerous publications in the media and the obvious relevance of the problem, there is clearly not enough scientific literature on this topic.

Non-chemical ones include, in particular, gambling (gambling), sexual

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and love addictions, addiction from smartphones and laptops, workaholic addiction, addiction to spending money, etc. The problem of mobile addiction (nomophobia) was first raised a few years ago, but now that nine out of ten people in developed countries have a mobile phone, it has become an epidemic. Nomophobia is a human condition in which the phone becomes an object of worship, a person unconsciously makes a call for the sake of the call itself, not realizing his actions, is not able to explain their cause, considers the mobile phone a part of himself, and without it he feels inferior.

The main goal of this work was to develop a therapeutic approach for the treatment of mobile phone addiction.

MATERIALS AND METHODS OF RESEARCH

How the WHO understands video game addiction

WHO Member States adopted the ICD-11 back in May 2019. Three conditions must be met for a diagnosis to be made. First, with a gambling disorder, a person does not control when and how much he plays. Secondly, because of video games, he sacrifices other activities and hobbies. Thirdly, even if a person is aware of the consequences, he cannot stop. This habit causes bad thoughts, distress, harms relationships with family, loved ones and other people, interferes with work, study - in a word, poisons life. According to the WHO, video game addiction is present when such abnormalities recur or persist for a year, but in severe cases, a shorter period is enough to make a diagnosis.

According to ICD-11 6C50 gambling disorder

Gambling disorder is characterized by a pattern of persistent or recurrent gambling behaviour, which may be online (i.e., over the internet) or offline, manifested by: 1. Impaired control over gambling (e.g., onset, frequency, intensity, duration, termination, context); 2. Increasing priority given to gambling to the extent that gambling takes precedence over other life interests and daily activities;

and 3. Continuation or escalation of gambling despite the occurrence of negative consequences. The pattern of gambling behaviour may be continuous or episodic and recurrent. The pattern of gambling behaviour results in significant distress or in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. The gambling behaviour and other features are normally evident over a period of at least 12 months in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.

The conditions of the conducted researches corresponded to the generally accepted norms of morality, the requirements of ethical and legal norms, as well as the rights, interests and personal dignity of the participants of the studies were observed.

Conducted research is adequate to the topic of research work.

- a) There is no risk for the subject of research.
- b) Participants in the study were informed about the goals, methods, expected benefits of the study and associated with risk and inconvenience in the study.
- c) The subject's informed consent about participation in the research was received.

The decision of the Ethical Committee at the Azerbaijan Psychiatric Association on the article of NA Aliev, ZN Aliev "Treatment tactics for mobile phone addiction" submitted for publication in psychiatric journals: in connection with compliance with its legislative requirements and regulatory documents is to approve the article by NA Aliyev, Z.N. Aliev "Treatment tactics for mobile phone addiction". Diagnosed according to ICD-11 6C50 gaming disorder. Patients were examined from January 2021 to July 2022 at the Mental Health Center of the Ministry of Health of the Republic of Azerbaijan (Table 1).

Table 1. Sociodemographic characteristics of patients.

Characteristic	Anafranil and Carbamazepine n =50
Age (years)	18-35
Duration of illness in month	5,0±0,5
Education:	
—secondary school	30
—higher education	20
Marital status:	
—never married	28
—married	10
—divorced or separated	12
Employment status—unemployed	30
— employed	20

DISCUSSION

The world has been swept by an epidemic of a new disease called “nomophobia” Nomophobia is by its nature akin to other addictions such as alcoholism, drug addiction, gambling addiction or shopaholism. Each of them serves as a compensation for some personality problems - complexes, unsatisfied needs, illusions, etc. In the case of a telephone, a person who cannot imagine an hour of life without it also compensates for personal problems, for example, the inability to make contacts with others people or fear of loneliness.

The signs of nomophobia sharply escalate when a person suddenly discovers that he cannot find his phone. They lie in the fact that the patient comes into an excited state, becomes irritated, fussy. He may experience dizziness, rapid pulse, increased sweating, trembling in the hands and feet. 66% of mobile phone owners are nomophobic

For a while, the nomophobe ceases to control his actions. He can nervously throw things around, turn everything around the house in search of his phone. The feeling of extreme discomfort will not leave the patient until he finds out where his phone has disappeared.

The trouble is that the victims themselves do not consider nomophobia a disease at all. They are sure that this is just a harmless habit, although its impact on the daily life of a nomophobe is quite significant. A person practically stops communicating with others and all his free time is busy only listening to melodies, changing settings on the phone,

downloading various pictures and programs for him, new games, and so on.

There is no doubt that mobile communications have revolutionized humanity. Reduced the distance between people, accelerated decision-making, simplified the receipt of information, and facilitated control over any situation. But she simultaneously replaced true communication with a surrogate one, increased our dependence on other people, erected invisible partitions even between loved ones.

Nomophobia is treated with so-called “exposure therapy”. That is, to begin with, the patient is taught to mentally imagine that he does without a telephone at all. Then a person from “mental training” should move on to practice.

However, there are doctors who do not believe in nomophobia. They say cell phone “addiction” is not a disease at all, but rather a social phenomenon. After all, the phone gives a feeling of constant connection with other people. And a similar “anxious state” is experienced by everyone who suddenly found himself cut off from people, without contact with loved ones - for example, he found himself on a desert island.

According to the organizers of the survey, One Poll and Secur Envoy, the number of people suffering from nomophobia is constantly growing. Two out of three people admitted that they were terribly afraid of losing their phone. Four years ago, only half of the respondents experienced this fear. Especially nervously perceive the loss of the phone those who are from 18 to 24 years old. [1]

Currently, there are no data in the literature on the medical treatment of nomophobia. This article is the first attempt to partially solve this problem. Given the fact that nomophobia is a type of addiction, we have adopted a tactic in therapy here [2].

The psychopharmacological characteristics of the drugs we use are well known in the literature [3, 4].

Stahl Stephen sowed that [5] commonly prescribed to treat: obsessive-compulsive disorder; depression; severe depression that does not respond to treatment; cataplexy syndrome; anxiety; insomnia; neuropathic pain/chronic pain. Mechanism of action:

Clomipramine

Class: Serotonin reuptake inhibitor (SRI).

It is a tricyclic antidepressant (TCA).

The active metabolite is a potent norepinephrine/noradrenaline reuptake inhibitor

It is defined as general and is used to treat:

(FDA-approved prescription in bold)

Obsessive-compulsive disorder

Depression

Severe and treatment-resistant depression

Cataplexy syndrome

Excitement

Insomnia

Neuropathic pain/chronic pain

How the drug works

Increases the neurotransmitter serotonin and norepinephrine/noradrenaline

The goal of treating depression is to completely eliminate the current symptoms and prevent recurrence in the future

Treatment usually reduces or even eliminates symptoms, but treatment should not be stopped, as symptoms may recur after the drug is stopped

Although the goal of treating OCD is to completely eliminate symptoms, this may be less than for depression

The goal of treating chronic neuropathic pain is to reduce symptoms as much as possible, especially in combination with other treatments

Continue to treat depression until all symptoms are gone (remission)

After the resolution of depressive symptoms, continue treatment for 1 year for the first episode of depression

For second and subsequent episodes of depression, treatment may need to be indeterminate

Use in OCD should also be indefinite from the time of initial treatment

It may also be uncertain in other anxiety disorders and chronic pain, but long-term treatment has not been well studied in these conditions

Side effects

Anticholinergic activity may account for sedation effects, dry mouth, constipation, and blurred vision

Sedative effects and weight gain may be due to antihistamine properties

Blockade of alpha adrenergic 1 receptors can explain dizziness, sedation and hypotension

Cardiac arrhythmias and convulsions, especially in high doses, can cause ion channel blockade

Serious side effects

Blurred vision, constipation, urinary retention, increased appetite, dry mouth, nausea, diarrhea, heartburn, unusual taste in the mouth, weight gain

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Fatigue, weakness, dizziness, Sedation, headache, agitation, nervousness, excitement

Sexual dysfunction, sweating

Life-threatening side effects

Paralytic ileus, hyperthermia (TCAs + anticholinergics)

Decreased seizure threshold and rare seizures

Orthostatic hypotension, sudden death, arrhythmias, tachycardia QT prolongation

Liver failure, drug-induced parkinsonism, increased intraocular pressure.

It rarely induces mania.

What to do about side effects

Reduce the dose

Switch to an SSRI or a newer antidepressant

Many side effects cannot be improved with a booster

Dosage and use

Usual dosage range: 100-200 mg/day

Initial 25 mg/day; Increase to 100 mg per day within 2 weeks; the maximum dose is usually 250 mg/day

Carbamazepine

Class: glutamate, voltage-gated sodium and calcium channel blocker (Glu-CB).

Anticonvulsant, antineuralgic for chronic pain, voltage-sensitive sodium channel antagonist

It is defined as general and is used to treat:

(FDA-approved prescription in bold)

Partial seizures with complex symptomatology

Generalized tonic and clonic seizures (grand mal seizures)

Mixed seizure patterns

Pain associated with true trigeminal neuralgia

Acute mania/mixed mania (equetro)

Glossopharyngeal neuralgia

Bipolar depression

Maintenance treatment for bipolar disorder

Psychosis, schizophrenia (auxiliary)

How the drug works

Acts as a use-dependent blocker of voltage-sensitive sodium channels.

It interacts with the open channel conformation of voltage-sensitive sodium channels.

It interacts at a specific site in the alpha pore-forming subunit of voltage-sensitive sodium channels.

It inhibits the release of glutamate.

Mechanism of action of the drug

For acute mania, effects should occur within several weeks.

It may take several weeks to months to optimize its mood-stabilizing effect.

Reduces seizures within 2 weeks.

Treatment duration

The goal of treatment is complete relief of symptoms (eg, seizures, mania, pain).

Treatment should be continued until all symptoms disappear or improvement is stabilized.

It is necessary to continue treatment for a long time so that mania and convulsions do not recur.

Best booster combinations for partial response or treatment resistance:**Tests**

Before starting: count blood elements, liver, kidney and thyroid function tests should be prescribed. During treatment: liver, kidney and thyroid function are checked every 6-12 months.

Side effects

CNS side effects are due to excessive activity in voltage-sensitive sodium channels.

The main metabolite (carbamazepine-10, 11 epoxide) can cause many side effects.

Mild anticholinergic effects may cause sedation and blurred vision.

Serious side effects

Sedation, dizziness, thought disorder, instability, headache

Blurred vision, vomiting, diarrhea

Benign leukopenia (transient; up to 10%)

Skin rashes

Life-threatening side effects

Rarely, aplastic anemia, agranulocytosis (unusual bleeding or bruising, mouth ulcers, infections, fever, sore throat).

Rarely, severe dermatological reactions (purpura, Stevens-Johnson syndrome)

Rare anaphylaxis and angioneurotic edema.

Rare heart problems.

Rarely, induction of psychosis or mania.

SIADH (syndrome of inappropriate antidiuretic hormone secretion) with hyponatremia.

Usual intermediate dose: 400-1200 mg/day

Dosage instructions

The suspension formulation produces higher peak levels than the same dose of the pill, so the suspension should generally be started at a lower dose and slowly titrated.

Take carbamazepine with food to prevent gastrointestinal effects.

Carbamazepine often requires upward adjustment of the

dose because the drug undergoes its own metabolism, thereby lowering its plasma levels from the first weeks to months of treatment.

Do not break or chew carbamazepine extended-release tablets, as this will alter the controlled-release properties.

Other warnings and yacht measures

Because the risk of aplastic anemia and agranulocytosis with carbamazepine is 5 to 8 fold greater than in the general population, patients should be carefully monitored for signs of unusual bleeding or bleeding, mouth sores, infections, fever, or sore throat. In the untreated general population, 6 per 1 million patients per year for agranulocytosis and 2 per 1 million patients per year for aplastic anemia.

It can aggravate angle-closure glaucoma.

Carbamazepine can reduce the effect of hormonal contraceptives, as they can lower plasma levels.

Due to the syndrome of inappropriate antidiuretic hormone secretion, hyponatremia and the risk of its complications, it may be necessary to restrict fluid intake.

Contraindications

If the patient has a history of bone marrow compression.

If the patient is positive for the HLA-B*1502 allele.

If you have a proven allergy to any tricyclic compound.

If you have a proven allergy to carbamazepine.

Suspension: in patients with hereditary problems with fructose intolerance.

Thus, the results of the study show that the combined use of clomipramine and carbamazepine in the treatment of nomophobia has a high therapeutic effect. We consider it appropriate to provide two clinical observations for proof.

Clinical observation 1: Patient N.D., girl. He is 18 years old and a university student. He has not been going to university for the past year. He sleeps only 3 hours out of 24 hours a day. The rest of the time he is busy with the mobile phone. Despite the efforts of his parents, he does not give up the mobile phone. The patient called the police 3 times that my parents were using force against me. Each time, the police did not find any signs of violence in the patient. After the last police call, he applied for treatment on his own request. After 6 months of treatment, all symptoms of nomophobia disappeared. Catamnesis data proves that he has returned to normal life.

Clinical observation 2: Woman 33 years old. About the last two that do not work anywhere. First he had a hand. Mobile Teflon addiction has peaked in the past year. So, he cannot stay without a mobile phone all day. Even at night, he sleeps with the phone on his stomach. The patient says that I can't sleep if I don't put the phone on my stomach. The patient asked the doctor for consent. After 6 months of treatment, all symptoms of nomophobia disappeared. Catamnesis data prove that he has returned to normal life. Thus, the Katamnesian data proves that he is back to normal life.

CONCLUSION

Respondent analysis was performed using an alternative statistical method. Clinical data indicate a high efficacy of Anafranil and carbamazepine in the treatment of mobile phone addiction. Pharmacological treatment of nomophobia very problematic. This is the first study on the use of Anafranil and carbamazepine, for treatment nomophobia randomized study. Thus, patients with nomophobia dependence gave a very good result.

Limitation of the study: First, our Anafranil in combination with carbamazepine treatment of pharmacological approaches to nomophobia study group and we recommend that these results be replicated in a larger population of patients in order to more accurately estimate the magnitude of the effect is necessary. Second, this work is a necessary study of the possibility of generalizability these data to males. Notwithstanding these limitations, this study suggests that, Anafranil in combination with carbamazepine is efficacious and well-tolerated in the treatment of pharmacological approaches to nomophobia.

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CONFLICT OF INTEREST STATEMENT

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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